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AMERICAN VETERINARY REVIEW,

FEBRUARY, 1880.

ORIGINAL ARTICLES.

LATENT GLANDERS.

BY PROF. A. LIAUTARD, M.D., V.S.

The question of contagious diseases amongst animals is one to which every sanitarian must pay more or less attention, and the various ways by which these affections are transmitted are no less important and interesting than the many different forms under which the pathological conditions may manifest themselves.

When disease exhibits itself upon an animal with an eruption of all the symptoms which every one knows, even if he may be unable to distinguish and recognize them, the task becomes quite simple. But when, on the contrary, the disease effects an insidious march ; when its manifestations are slow to appear ; when even with a rotten organism, an animal seems to enjoy perfect health, as shown by his external appearance, the condition of his skin, his good appetite, his ability to work, and the immunity enjoyed by other animals with which he may have been in contact ; then, how serious and more dangerous that disease becomes—how much

more important it is to be able to fully realize the condition and character of the disease.

There is, probably, none which comes under this peculiar aspect outside of glanders. How simple, in fact, it is for the veterinarian to establish a diagnosis of glanders, when the three essential pathognomonic symptoms of the disease are existing; when the gland, the discharge, and the ulcerated condition of the septum nasi are presenting the characteristic conditions belonging to that disease. But with how much hesitancy will an opinion be expressed in the absence of one of these symptoms alone, when the chancres of the septum nasi cannot be discovered, or when with this, the glands do not have the known condition of adhesion to the bones, and still more, when there is only a slight but characteristic discharge, perhaps at times bloody, with possibly a peculiar condition of the membrane of the nose, as regards color, smoothness or softness to the touch—in other words, when the patient presents only the external symptoms of that form of the disease, but recently recognized, and which to-day we speak of as latent glanders, be it laryngeal or pulmonary.

How extensive practical observations must one have made, how many cases must a practitioner see, before he can, in the presence of this form of the disease, send his patient to the knacker's yard without hesitation?

This form of glanders, as we all know, is the most dangerous of any; for the affected animal may remain, to all appearance, in perfect health, eating and working as well as ever, and yet capable, at the same time, of infecting and destroying many valuable animals with which it may come in contact. Even when a suspicious discharge from the nose continues, or appears at times, no danger is suspected by the owner, who sees in this symptom evidence only of a cold.

I have been prompted to make these few remarks by a single case of glanders which recently came under my observation, and the peculiarities it presented will, I believe, prove interesting.

Mr. W—, of this city, had a valuable mare, six years of age, a fast trotter, and valued at several thousand dollars. After a season of training she was sent to a breeding farm in New Jer-

sey, and, being covered, remained there for some time, after which she was returned to her owner in apparent perfect health. She had a little cold, the remains of a kind of distemper which had run through the horses of the breeding farm. She discharged some from the left nostril; but beyond that was in excellent condition. In due time she dropped a horse colt, which, from general appearances, promised to become worthy of his parents among the records of trotting horses. This was towards the beginning of May, 1879.

About the 16th of May I was requested to visit New Jersey, some sixty miles from New York, to examine the horses of a large printing works, where glanders was supposed to prevail to some extent, and while there was also asked to visit all the horses belonging to Mr. W—, a short distance off, and principally the mare in question.

I found the mare by herself, with her colt, a well formed and developed little fellow, a few days old. The mare was round, fat and smooth. She felt well and ate well, and seemed free from disease with the exception of a little discharge, and a slight swelling about the maxillary space. The discharge was not very abundant—less than it had been, I was told—but thick, sticky, and adherent to the nostril, which was more or less dirty from it. The gland was but slightly painful, somewhat well defined, and adherent to the bone. The mucous membrane was rosy, not granular to the touch, but of rather a suspicious hue towards the upper part of the nostril on the right side. Her history was given as above reported; she never had been around the horses of the printing works; had never been ill nor shown signs of sickness until since she came back from being served by the stallion.

But a short time before this I had had the opportunity to see glanders under all its forms, in several of the horse-car stables of New York, and had I at that time seen an animal in the same condition as this mare, I would have had no hesitancy in condemning her; but, with her history and condition, the value of the animal, the presence of the colt in his robust and healthy state of development, I hesitated and put her down on my note-

book as "*very suspicious of glanders.*" The colt, it is true, was entirely free from disease, but I expected that he would soon come to my assistance and develop the disease also.

I had her taken away from the other horses and put in a place where all possibilities of contagion were removed, and she with her foal were ordered into most strict quarantine. She was prepared for and received a six-drachm dose of aloes 24 hours afterwards. At my next visit the aloes had operated and she was scouring freely, but showed no change in her general condition. The colt was as gay and healthy as before. The mare was then placed under the administration of mineral tonics and alternative applications of Girard's ointment (bichloride of mercury as a base) on the glands. At subsequent visits no change was detected; the discharge was, perhaps, a little diminished, the gland possibly smaller and more loose. She and the colt remained apparently healthy. Once, as I examined her, I found a few drops of blood in the discharge, and once I detected on the left side of the septum a very small abrasion. There was no more doubt now, and I expected three days after, at my next visit, to find and show the owner a well-developed ulcer, and then obtain his consent to have her destroyed. But no, everything disappeared. No more blood in the discharge; no more abrasion of the septum, which was rosy and looked healthy, the gland remaining the same. The mare looked well, the colt growing.

As both were far from the other horses, and in a place where contagion was impossible, I acquiesced in the desire of the owner to await further developments. The same treatment of mineral tonics and applications upon the gland was continued, with apparently no changes; though at times Mr. W—— thought the discharge had disappeared and the gland reduced entirely.*

About the middle of November I was consulted about her again, as to the propriety of putting her to work. As I had not seen her for several months, and as I could not come to a conclusion from the description of her condition given to me, I sugges-

* Some time afterwards the owner, at my request, collected some of the discharge upon a piece of glass, and with this I inoculated an old horse with negative results.

ted, that she be brought to town and that I should see her.

On the 6th of December I visited her and found her in almost the same condition, with the exception that the discharge was more abundant and had then all the characteristic appearances of the nasal discharge of glanders.

Tired of this state of affairs, though yet in hopes that I might be mistaken, the owner came to the conclusion to let me have her, to do with her what I thought proper. As it was a case presenting unusual interest, and desiring to have the students of the Veterinary College watch her for a short time, I had her placed in an isolated box stall of the hospital, and put alongside of her, and inoculated, an old horse. The following is an extract from the report presented by one of the senior students—Mr. R. W. Foote—of the history of the two animals from the day of admission to the time when they were destroyed.

Symptoms in the morning:—Bay mare—Temperature, 102 $\frac{1}{2}$, pulse 38, respiration 12. Gland enlarged and adherent; discharge principally from the left side and slight from the right; has a short and moist cough; Schneiderian membrane healthy. She is prepared for a dose of physic.

Dec. 11.—Temperature 102, respiration 13, pulse 30 and weak.

Dec. 13.—Temperature 102, respiration 12, pulse 40; is purging well.

Her companion, the grey gelding, was inoculated on the outside of the left nostril, the right side of the upper lip and the Schneiderian membrane of the left nostril. The grey horse showed a temperature of 99 $\frac{1}{2}$, pulse 41; did not count his respiration, which was emphysematous.

The following are the symptoms presented by the two animals afterwards.

Dec. 13.—**BAY MARE.**—Evening: temperature 102 $\frac{1}{2}$, respiration 17, pulse 56. **GREY GELDING.**—Evening: temperature 103 $\frac{1}{2}$, pulse 42; no change in external aspect.

Dec. 14.—**BAY MARE.**—Morning: temperature 102 $\frac{1}{2}$, respiration 18, pulse 52. Evening: temperature 101 $\frac{1}{2}$, respiration 17, pulse 52. **GREY GELDING.**—Morning: temperature 103, pulse

44. Evening: temperature $103\frac{1}{2}$, pulse 46; injection on mucous membrane of the nose swollen and congested.

Dec. 15.—**BAY MARE.**—Morning: temperature $102\frac{1}{2}$, respiration 19, pulse 48. Lymphatics on the left side of the face are swollen and tender, has two little red spots on the mucous membrane of the left nostril. Evening: temperature $101\frac{1}{2}$, respiration 12, pulse 42. **GREY GELDING.**—Morning: temperature 102, pulse 48 and weaker; the red spots of yesterday look better and seem to disappear. Evening: temperature $101\frac{1}{2}$, pulse 40.

Dec. 16.—**BAY MARE.**—Morning: temperature $101\frac{1}{2}$, respiration 14, pulse 34; gland of the right side a little enlarged; right and left nostrils of a slight lead color and glossy in appearance; one of the red spots spoken of on the 15th has developed a nice chancroid ulcer. Evening: temperature $102\frac{1}{2}$, respiration 11, pulse 36. **GREY GELDING.**—Morning: temperature $101\frac{1}{2}$, pulse 40; the abrasions on the inoculated spots of the Schneiderian membrane are disappearing, but the inoculations on the nostrils have now the appearance of farcinous ulcers and discharge a thin, bloody pus; the glands are yet of the natural size. Evening: temperature $101\frac{1}{2}$, pulse 42.

Dec. 17.—**BAY MARE.**—Morning: temperature $102\frac{1}{2}$, respiration 11, pulse 38; profuse discharge from left nostril, large ulcers on the left nostril. Evening: temperature $103\frac{1}{2}$, respiration 14, pulse 38. **GREY GELDING.**—Morning: temperature 102, pulse 38; lymphatics of the neck swollen and sore; inoculations on the nasal mucous membrane all healed but still a little red; slight discharge from both nostrils; inoculation outside of the nostrils looks bad and characteristic of farcy. Evening: temperature $100\frac{1}{2}$, pulse 38; the inoculation of nostril looks ulcerated.

Dec. 18.—**BAY MARE.**—Morning: temperature $102\frac{1}{2}$, respiration 14, pulse 38; ulcer is larger. Evening: temperature $102\frac{1}{2}$, respiration 14, pulse 38. **GREY GELDING.**—Morning: temperature 102, pulse 38; same condition. Evening: temperature 101, pulse 38; he was sent to the offal dock.

The mare was destroyed on the 20th. Post mortem examination was held immediately after death.

The chest was opened on the left side and the trachea and

larynx removed. All over the surface of the right lung were white spots, granular in appearance, projecting and hard to the touch; the anterior portion having these in greater number. The surface of the left lung had the same appearance, excepting that the tubercular deposits were not so numerous. Some portions of the lungs were emphysematous. On cutting into the lung tissue, nodules were found all through its substance, and many of them, being cut into, showed little collections of pus. These little bodies varied in size from very minute to the size of a bean. The lung substance was easily torn and could be readily punctured with the finger. The bronchial tubes being opened were found all healthy and free from ulceration, but containing here and there a small amount of muco-purulent discharge. In the trachea no lesions were found, but on the right side of the larynx in the ventricle existed a larger ulcer, while smaller ones were detected scattered upon the mucous membrane. Lymphatic ganglia of the trachea were much enlarged. On antero-posterior section of the head, a little to one side of the median line, there was presented to view in the left nasal cavity the turbinated bones extensively covered with ulceration, both externally and internally; the upper portion of the nasal turbinated being filled with suppuration. On the internal surface of the same bone existed a small granuloma hanging somewhat in the cavity of the nasal fossa. On the left side of the septum nasi many ulcerations were found near the upper border and the sigmoid portion. The chancres of this cavity had all the appearance of acute ulceration and their development was probably excited by the debilitated condition of the patient following the severe purging she had been subjected to. The right nasal cavity was free from ulceration, but showed beautiful swelling and engorgement of the lymphatics, which appeared like farcinous cords running under the mucous membrane. The sinuses were free from suppuration or ulcer.

What now will become of the colt? So far he is healthy and robust. Nothing in him indicates that he is likely to break down and will have to be destroyed as glandered. Is it possible that he may develop into a fine horse which, however, when the time

comes, may be affected with some severe form of disease that, debilitating his system, will soon excite the manifestations of glanders and then give rise to the so-called *spontaneous* development of an affection which he has kept within himself until then, and which he had inherited from his mother *in utero*?

SUPPURATION OF THE FOOT AFTER NEUROTOMY.

By A. A. HOLCOMBE, D.V.S.

On the 20th of October, 1879, I saw an eight-year old brown mare, with navicular-arthrosis of both fore feet, complicated by side bones. She had been lame for the preceding nine months, a greater part of the time. For several weeks previous to my being called, she had been excessively lame, so that she was discontinued from work; simple exercise caused such suffering that her body was covered with sweat, and she could not be kept in condition. In the stable, she pointed continually, but most with the near foot. An unfavorable prognosis was given, and neurotomy recommended. After careful preparation, the operation was performed on the 24th, resulting in complete insensibility of both feet. She walked well, at once, and seemed entirely free from pain. The operating wounds healed kindly, by the second intention, with the exception of the outside one on the off leg, which healed by the first intention. She improved rapidly in condition and spirits, and at the end of two weeks' time, was taking a little walking exercise to the halter every day; yet at irregular intervals the near fore foot was advanced and seemed to cause a little uneasiness, although there was no lameness. At the end of four weeks she trotted sound as ever, and the feet presented a fine condition, with the exception of the fever. The cicatrices on the near fore leg were still unusually sensitive to compression. At the end of five weeks the mare was clipped, and the owner being desirous to obtain her use, she was put back to work in a coupé upon the city pavement. For the first few days she made two or

three short calls daily, and stood the work well, with the exception of a tendency to interfere on the near leg. Whenever this happened, she would go lame for a few steps, and then go sound again. This leg was now booted, and the mare received hard work for about two weeks, when she went lame on the off hind leg, from curb, and favored the near fore leg whenever at rest. On being called to see her now, I found the near leg infiltrated with serum as high as the knee; intense pain from the slightest pressure at the point of operating, and the lymphatics inflamed and tender. A close examination revealed much fever of the foot, and the slightest suppuration on the outside heel, near the line that divides the horn and skin. There was a slight abrasion of the skin at this point, and the tissues appeared bruised beneath. Cold water treatment was instituted at once, but did not arrest the progress of the suppurative process, for in a few days' time the hoof was half sloughed away, and the animal was destroyed, to prevent unnecessary suffering. In making a post mortem examination, some interesting lesions were found. The navicular bone of the near foot presented three large ulcers, extending deeply into the bone structure, while the surrounding tissue was discolored by the inflammatory changes, and adhesions formed between the tendon and the navicular's bursal surface. The os pedis showed periostitis of a greater part of its surface, the process, in many places, being accompanied by suppuration. Toward the toe, the suppuration was confined to the outer layers of the periosteum and the keratogenous membrane, but on the superior portion of the anterior surface, and over both the retrossal processes, the entire periosteum had sloughed away, leaving the bone tissue exposed. The external retrossal process was almost completely destroyed by caries, while the same destructive changes had begun just beneath the attachment of the extensor pedis, and on the outer surface of the internal retrossal angle. The side bone upon the outside wing of the os pedis was fractured across, about half an inch from its superior border, probably as the result of the injury which at the same time caused abrasion of the skin on the heel, and started the suppuration. The coronary band was greatly thickened from infiltration, and both quarters were freely

suppurating, so that the horn was completely separated at these points. An examination of the internal plantar nerve showed, upon the distal extremity, the development of a neuroma, which accounted for the tenderness of the parts and the tendency to rest that member. The external nerve was cicatrizing in the usual manner. The internal digital artery and the lower part of the collateral of the cannon, had undergone degenerative changes, which had terminated in a complete occlusion of the caliber for a distance of four inches. The subcutaneous connective tissue contained much effused serum, while the lymphatics were distended with fluid, and a greatly increased number of cellular elements. The off foot presented only simple navicular arthritis and small side bones.

STRYCHNIA IN SPINAL MENINGITIS.

BY A. A. HOLCOMBE, D.V.S.

Since the early summer months of 1876, I have been studying the effects of strychnia in spinal and cerebro-spinal meningitis. In the latter form of the disease, the only cases that ever recovered for me were those that received large doses of this remedy, in conjunction with the use of belladonna. The same treatment has proved most effective when employed in uncomplicated spinal meningitis. I have had a recent opportunity to test its efficacy in an acute attack of the disease, and with such favorable results as to warrant the report of the case.

The subject was a nine-years-old gelding, used for light coach work, which he had performed regularly up to the morning of the 21st of December last, when he was noted off his feed and standing listless in his stall; but when moved out walked as well as usual. At one o'clock P.M., I found him standing in the stall with marked opisthotonus, scarcely able to move the hind parts in progression, and wobbling from side to side as though about to fall. His pulse was beating at eighty two per

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been study- nal meningi- es that ever doses of this The same in uncompli- uity to test such favor- light coach morning of the ff. his feed t walked as m standing e to move le to side as ny two per minute, and so weak as scarcely to be detected at the jaw. The respirations were accelerated to twenty; the mucous membranes slightly injected; the hind extremities cold, and the temperature at $104\frac{1}{2}$ ° F. The urine which he was seen to pass during the morning, looked normal, but constipation was quite marked. Believing from the rapid development of symptoms, especially the loss of power behind, that he would live but a short time and could not long remain standing, he was placed in a box stall, and received seven drams of aloes, one dram of ginger, and half a dram of calomel in a ball. This was followed by ounce doses of tr. belladonna every two hours, a strong mustard poultice to the lumbar region, and soft food, with plenty of water, ordered. Early next morning he was purging freely, the faeces being very soft and of unpleasant odor; the pulse stronger; the temperature at 104 °; the respiration sixteen, but no appetite nor improvement of locomotion. He now received half grain doses of strychnia every two hours, in conjunction with the tr. belladonna every two hours between. On the 23d there was no improvement noticed, and the purging still continued. The dose of strychnia was increased to one grain every two hours. On the 24th the temperature was down to $103\frac{1}{2}$ °; the pulse at seventy-eight; the respiration at sixteen; the purging remained free as on the 22d, and very fluid; no appetite, but some slight improvement in the gait. To arrest the purging and stimulate the appetite, the strychnia was now given, in one and a half grain doses, in solution in ounce doses of tr. capsicum. The belladonna was continued, and another poultice of mustard applied to the loins. The purging stopped within six hours, the appetite returned, and marked symptoms of improvement were present at the time of next visit. The dose of strychnia was gradually increased and the belladonna diminished, until the patient took four grains of strychnia every three hours, and yet no signs of poisoning from the drug could be detected. Within two weeks' time he was taking exercise, and resumed work after three weeks of sickness and convalescence. The conclusion I have come to regarding the use of strychnia in these diseases is, that they demand large and oft-repeated doses of the drug, and that when the appetite fails, or excessive purgation results from

the purgative, it should be given in the tr. of capsicum. As seen in this case, the system stands large doses without unfavorable developments; for marked as was the opisthotonus at first, it was at no time increased during the administration of the strychnia.

EDITORIAL.

ARMY VETERINARY SURGEONS.

In back numbers of the *REVIEW* we have presented our readers with the statutes regulating the positions, requirement, rank and pay of veterinary surgeons in the English and French armies. In this number we reprint an article upon the same subject regarding the Italian military service. Our object in doing this is to present our military authorities with true light on this subject, and possibly to assist them in the work of reform which we are told, is to be inaugurated in that branch of the service. An improvement has already been inaugurated, published in September, which states that "Hereafter appointments as veterinary surgeons will be confined to graduates of established and reputable veterinary schools or colleges." This is an important step, but is it likely to be carried into effect, if one looks at the position, and above all, the *pay* of said veterinarians?

To be able to answer the many inquiries which have been made me, I wrote to the Adjutant-General of the army, and his answer will be found in full in this number of the *REVIEW*. As will be seen, the pay is nominal. What are seventy-five or a hundred dollars a month for a gentleman, who, by his education and his knowledge, ought to expect to realize, by his profession, a much larger return for his work; and besides, what is the position of the veterinarian in the United States service? Is it anything like that which we find in other armies? Has he a rank? Is he an officer? Is he even a military man? We understand, though we have no official authority for it, that he is not enlisted, but is merely a civilian, which is called upon to perform certain military

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duties! How does he live? Is he expected with this meagre allowance to furnish himself with the necessaries of life—his uniform (if any is required), his horse, his equipment? Where do they come from? Of course we must acknowledge that we are somewhat ignorant on the subject.

In the French army a first gift of 400 francs is made to licentiates for equipment, and a supplement of 500 francs to those who are promoted as assistants. How is it in the American service? We hope some of our military brothers will favor us with information on the subject.

Another important question, however, presents itself—upon which we have already dwelt—that is, the manner in which the appointment is to be made. The new regulations say that it is to be made by the Secretary of War only on recommendation from the commanding officer of the regiment; and the letter of the Adjutant-General says, "upon the favorable report of a regimental examining board."

In Europe examinations are also required. Some of them are very severe, being written, oral and practical. Now what is the examining board for admission in the United States army to consist of? Certainly it cannot be composed of veterinarians, and if made up of physicians will it be a competent Board? These are points of major importance, and which we hope will not escape the attention of the gentlemen engaged in the work of reform.

What we hope to see established is a regular corps of veterinarians, with a principal inspector, and his officers distributed in the different regiments of cavalry. What the reforms must principally rest upon are regular appointments, with rank, quarters and privileges of officers, and pay in proportion to the education and ability of the veterinary practitioner, with a social standing equal to the surroundings in which he may be placed.

PLEURO-PNEUMONIA IN THE EASTERN STATES.

The subject of contagious pleuro-pneumonia does not seem in any wise to be losing its interest to the public in those localities where it already exists or where it may readily be introduced.

In a Massachusetts paper recently sent us appeared an article relating to a disease with which a heifer was affected and destroyed at South Hadley. Dr. Cressy of Amherst was called to see the case, which had been suspected as pleuro-pneumonia. His post-mortem examination showed the lungs to weigh twenty-six pounds. The bronchial tubes were found full of mucous froth. "Dr. C. pronounced the disease catarrhal fever or bronchial catarrh. This was a decided relief to the farmers in that vicinity, *as another animal was similarly affected** and an outbreak of pleuro-pneumonia thought to be imminent. Dr. C. was called the third week in November to Waterbury, Ct., where he found *twenty or thirty cases of the same disease*. He also encountered it at Hartland, Ct. It is not contagious and no fatal cases have been reported, although the one at South Hadley would, undoubtedly, have proved so. It is an influenza somewhat like the epizootic which afflicted horse-flesh in 1872, although, happily, not yet as widespread." Our readers may draw their own inferences from the above report, and some will, no doubt, recall similar expressions of opinion given a year ago regarding pleuro-pneumonia in New York.

The *New Hampshire Patriot*, issued at Concord on Jan. 8th, 1880, under the head of "Pleuro-Pneumonia," contains a long account of an outbreak of disease at Haverhill, N. H., and which had given rise to considerable excitement among the people of the vicinity, who suspected it to be contagious pleuro-pneumonia. Dr. Thayer of Boston, Mass., visited the affected animals on the 29th of December, in company with the State Commission, and the results of his investigation are given below in conjunction with the reporter's description of the hygienic conditions found. The barns seemed to be well situated for light and air, but the Commission objected to the ventilation. Twenty calves were found housed in a space eighteen feet long, twelve feet wide and seven feet high—being tied up in two rows, one on either side. "There had been improvement in the sick animals since the time of the Commission's first visit, but quite a number were more or

(*The italics are ours.—Ed. A. V. R.)

less affected with a cough. A red calf that was examined showed a respiration of 40 and a pulse of 80, and this was the only animal in the herd that could be said to be dangerously ill, though the owner regarded others in a similar condition.

"The first animal looked at was a calf that was picked out by Mr. Merrill (the owner). Dr. Thayer declared, after a careful examination, that there was no acute disease affecting it. The lungs were sufficiently resonant to refute the theory of the existence of pneumonia. The second calf was found to be in an equally favorable condition. A light-colored cow, that, to all external appearance to the casual observer, seemed to be the sickest animal of the herd, was next examined. There was a little dullness on the left side. Her temperature was 101°, pulse 60 to 62." After examining some others which were sick and making post-mortem examinations upon two, in which lesions of pneumonia were found, the conclusions of Dr. Thayer are given as follows: "Mr. Merrill's herd is affected with pleuro-pneumonia. The disease is not of the contagious character. It is enzootic, or, in other words, confined to one locality." Further on it is said, "the disease arises from improper sanitary condition about the buildings." It would seem, though, that some outsiders are inclined to think the housing of a herd of Canadian cattle in the barn last fall had something to do with the outbreak. At a meeting of the public in the town hall in the evening, among other remarks by different persons present, Mr. Merrill said: "My barn seems to be well ventilated, and I cannot see how cows should be affected when all admit that the cow-stable is in good condition. Neither can I explain why some of these same cattle should be taken sick before they came to the barn, if it is the sanitary condition of the buildings that produces the disease." Later in the discussion, Mr. Merrill asks, "How do you explain the coughing of my cows that have been in good quarters?" To which Dr. Thayer replied: "The coughing of the cows is no more than I have frequently and commonly seen in barns where cows are fed on dry feed. There is no disease among your cows, only in the case of the cow specified above, except what might be produced by dry food."

Dr. Watson then remarked: "If I understand you, doctor, you would quarantine these cattle." Incomprehensible as it may seem to the profession after what was said above, Dr. Thayer replied: "I should in Massachusetts, because we have authority to do it. We have saved money by it. The little expense attending quarantine is small compared with an extensive loss of cattle." Mr. David Whitcher said: "I have had some trouble with my cattle. They have had a cough and still have one. They breathe badly, still they are in good condition otherwise and feel well." Mr. Merrill finished by saying that some of his calves that had been sick were bought out of the drove and some were raised on the place. Also that a neighbor bought two nice calves last fall and they soon commenced to run down and afterward died.

The above extracts embrace everything of importance that can bear upon the question of contagious or non-contagious pleuro-pneumonia in this outbreak of disease. Dr. Thayer says it is enzootic and is not contagious. According to the testimony of the farmers, given above, the disease is present upon at least three farms, on two of which calves were introduced recently from a drove. One cow had the appearance of being quite sick; and yet with dullness upon one side, a temperature of 101° and pulse 60 to 62, she is pronounced to have non-contagious pleuro-pneumonia.

But why quarantine cattle that have a disease in no way communicable to others? How can money be saved by it, or why is there any danger of extensive loss? We confess to being unable to understand that any necessity can possibly exist for the adoption and enforcement of measures which look to the prevention of the spreading of a disease that has not the power to progress beyond the limits of the local exciting cause. Sporadic pleuro-pneumonia of cattle is a very rare disease, and in an enzootic form much rarer. Still we believe Dr. Thayer's long-time experience with this disease is such that his opinion must be accepted, notwithstanding the circumstances reported might make us suspect the disease was contagious.

REPORT OF THE CATTLE COMMISSION OF NEW JERSEY.

Dr. Corlies, one of the veterinary surgeons to this Commission, makes a report to the Governor's agent on the 15th of December. After having been engaged in an attempt to free the State of contagious pleuro-pneumonia, for the previous eight months, we find set forth in concise terms, the measures which have been adopted for the suppression of the disease; some of the obstacles met with; an expression of opinion as to the value of methods that should or should not be adopted; the number of animals that have been examined by the inspectors; the number found diseased and the number destroyed; but wisely refraining from an opinion as to the condition of the State regarding the prevalence of the disease at the present time. New Jersey is not yet clear of this *plague*, and she will not be so long as she continues to release from quarantine, after a period of ninety days, animals that have had the disease.

PETITION TO CONGRESS.

At the annual meeting of the Philadelphia Society for the Promotion of Agriculture, Dr. Gadsden called attention to the subject of contagious pleuro-pneumonia, and after remarks by different members Mr. Burnett Landreth offered the following preamble and resolution, which were adopted:

Whereas, It is patent that the ravages of the "lung plague," or pleuro-pneumonia, can only be arrested by heroic measures, be it

Resolved, By the Philadelphia Society for the Promotion of Agriculture, that the General Government be urgently requested to take such action as will prevent the transport of cattle from infected districts in the seaboard to the interior, which will certainly be infected unless decisive action be taken by the United States Board of Health, or other proper department.

VETERINARY MATTERS IN PENNSYLVANIA.

The sixth quarterly report of the Pennsylvania Board of Agriculture has been received. Among other matters appears the report of the Secretary of the Board, who, as special agent of the Governor, has been dealing, since the 1st of May, with contagious pleuro-pneumonia. After giving a summary of the legislative action in regard to the disease, the Commission issued by the Governor, and his own order to "all owners of cattle," etc., etc., the Secretary reports that twenty-seven herds, including four hundred and eight animals, have been quarantined. That a stamping out process has been adopted which can, by any possibility, prove effectual, does not appear from this report; for on page 26, under head of "Herd No. 2," appears the following: "Contains twenty cows, two bulls and ten calves; was quarantined June 12. Previous to quarantine, four head had died, and after the enforcement of the quarantine, fourteen head were killed. With one possible exception, *all* the animals were affected, and a number of them are now in a condition in which they are worse than useless to the owner. In this case, the evidence is strongly in favor of the theory that the owner conveyed the disease to his herd by assisting in the care of another infected dairy. No spread of the disease to adjoining farms; but it is quite probable that the disease was carried from this herd to herd No. 8 in the clothing, or on the person of the owner, who administered medicine to both herds. This herd has furnished an illustration of the disease in one of its worst forms, but is now believed to be clear, but not beyond the danger of infecting other stock."

From the above statement it will be seen that twelve head of the original herd still live, and "a number of them are now in a condition in which they are worse than useless to the owner," yet further on he believes the herd "to be clear." Clear of what? Clear of the disease? If so, why are they "not beyond the danger of infecting other stock?"

Herd No. 1 was released from quarantine on September 4th, and "were as well as they probably ever will be." Herd No. 23, "at the request of the owner, are being treated by our surgeon."

Turning to their published list of officers of the Board of Agriculture, Dr. C. B. Michener appears as the veterinary surgeon, and presumably he is the "our surgeon," who is treating contagious pleuro-pneumonia with "the fumes of burning sulphur" as a measure of eradication.

A more suicidal policy than that adopted by the State of Pennsylvania, as inferred from the report before us, can scarcely be conceived. Better far for the interests of the country and the veterinary profession, that the disease be allowed to follow its own course, than that a tampering policy should be attempted, which can only result in disaster. The admissions of the special agent of the Governor show that he either knows nothing whatever of the dangers attending the disease with which he is dealing, or else is blind to the responsibilities which the State has placed on him.

In his commission, the Governor directs his agent to slaughter diseased animals whenever it is found necessary, and yet treatment is attempted upon some, while others are freed from quarantine before they are free from the disease! Such measures can never prove effective as a means of suppression, and the presumed security which official assurance will serve to cultivate in the people, must react to produce an unguarded spread of a disease so insidious as pleuro-pneumonia.

"*Abortion among cows*" is also treated of in this report by Isaiah Michener, V.S., chairman of a committee, appointed by Governor Hoyt, to investigate this disease. The report offers nothing new, and omits very much of importance that is already known to the profession, concerning this very interesting subject.

HYDROPHOBIA.

The recent experiments of M. Raynaud prove conclusively that the saliva of hydrophobic human patients is capable of transmitting the disease to the lower animals, and presumably also to man.

His experiments consisted in the inoculation of rabbits with saliva from a patient, the day before his death, which served to

induce the disease in these animals in from four to five days' time.

Inoculation from these rabbits to others also produced the disease in about the same length of time. The predominating symptom in these cases was paraplegia, there being no furious stage.

NOTICE.

Ever since its first publication, the REVIEW has been regularly issued in the first part of each month, between the second and fifth, and it has been our endeavor to have it delivered always as regularly as possible. Still, we now and then receive complaints that it has not reached the anxious subscriber. We cannot account for this except from some defect in the direction or possibly in the delivery at the post office. To try to remedy this, we would ask our subscribers who may have changed their domicile since their last subscription, to send the new and proper address, to which said REVIEW can be then properly directed.

A TESTIMONIAL.

A circular calling for subscriptions to a Testimonial to Sir Frederick Fitzwygram has been sent us and will be found in the present pages.

Sir Frederick has shown much interest in the advancement of veterinary science in England, and exerted much of his influence in behalf of the profession and its members.

The testimonial we have no doubt will prove a great success.

VETERINARY HONORS.

M. BOULEY (member of the Institute) has been appointed Titular Professor of Comparative Pathology, a new department established at the Museum of Natural History.

TRANSLATIONS FROM FOREIGN PAPERS.

GOURME; OR, HORSE VARIOLA.

NATURAL AND IRREGULAR FORMS OF THIS DISEASE—INOCULATION AS
A PROPHYLACTIC MEANS OF ITS COMPLICATIONS.

BY M. L. TRASBOT.*

(Continued from page 404.)

The different experimental and accidental modes of transmission of gourme, being now described in a general way, we must, in a few words, consider now the various forms that it may assume, and look for the causes of its complications, whether mild or serious. From a short exhibition of these we will arrive at the rules to follow to keep the disease in its natural limit of pustular development, free from all serious complication, and thus only likely to terminate by a certain and rapid recovery.

To this day, so as to describe the complete pathological history of this disease, it has been customary to divide it into benignant and malignant. The first including all the catarrhal inflammations of the anterior respiratory organs, with or without abscesses of the lymphatic sub-maxillary ganglia. Even this was by many subdivided into various species. Delafond divided it into mild and severe, according to the intensity of the local phenomena and of the febrile action accompanying them, but ending nevertheless, after varying lengths of time, by a complete resolution. Under the name of malignant gourme, were also grouped all the complications likely to endanger the life, or at least to leave behind them long or even incurable marks of the existence of the disease; such as lobular pneumonia, severe bronchitis, abundant and continual suppurations, &c.

* Translated by A. Liautard, M.D., V.S.

This division was acceptable, and even in those days obligatory. When the irregular manifestations of the disease only were considered necessary, these were to be classified. To day this cannot be. It is necessary to consider, first the normal form, and then all that which was looked upon as belonging to it.

Desiring to prove that gourme is essentially equine variola, I must first speak of the pustular eruption, and afterwards mention all the inflammatory accidents resulting from any cause interfering with its development.

The regular eruption of gourme was described under the name of horse-pox, by M. Henry Bouley, Vol. IX of the *Dictionnaire et Medecine Veterinarie*. It would be useless for me to reproduce it. Complete and precise as it is, I would have nothing to add to it. There is, however, a point of detail upon which I may say a word, and that is relating to the configuration of the pustules at the middle period of their evolution.

M. Bouley says: "These vesicles were smooth at their surface without any depression; they had a pearly appearance." This is indeed their true form when they appear after what may be called the internal infection. They are regularly hemispherical, until the time when the epidermis which covers them is torn or raised as a small disk, to allow the escape of the virulent serosity accumulated underneath it.

Still, all authors repeat that the pustule of horse-pox, like that of vaccine, is umbilicated at its apex when it arrives at the period of secretion. Many amongst them indicate even this center of depression as a condition almost specific. This is an error, resulting from the fact that it is inoculated horse-pox which has been always observed. The umbilicated condition is, indeed, seen only upon pustules developed at the point proper of the inoculation. All the others, if they have not been frayed at their summit, remain perfectly rounded, till the time when their epidermis is falling off they are covered with an irregular scab. Things are here identical to what they are in sheep, and probably also in all other variola.

When a sheep is inoculated with variola, the pustules which are developed at the point of puncture are also developed in their center at the period of secretion, while all over in other places,

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other than those of inoculation, they are hemispherical, exactly as if they had been developed on a subject infected by surrounding causes. This explains why, at a certain time, discussions were carried on upon the true form of the varioloid eruption in sheep, in which some authors have recognized as a specific character the umbilicated condition. This disposition is the effect of inoculation. It is not specific to the variola of any species.

At the point of puncture, immediately and by first intention, a cicatrix of the small wound takes place, and, as a consequence, an adhesion, somewhat more solid between the dermis and epidermis of the skin, in such a way that the secretion, taking place several days later, raises more easily the epidermis round the cicatrix than upon it; hence, the formation round this of a circular projection, which surrounds it and leaves it a little hollowed—umbilicated in form.

This is why, though it does not make it an essential character, pustules of *inoculation* are umbilicated in the horse; why also, upon individuals of the bovine species, as in man, vaccinal pustules developed from inoculation, are invariably depressed in their center for a certain time. Consequently, it is not exact to say that this disposition is a distinctive sign of equine pustules. I have insisted on this point because some practitioners might hesitate to make a diagnosis on observing that the character, so-called specific, might be missing.

This stated, I will not go into the clinical description of equine variola, as it is well known. If there is a point which may require, however, some explanation, it is that concerning the confluence of the pustules in some parts of the skin. First M. Bouley, and afterwards every one has shown that the eruption is often most concentrated at the inferior extremity of the head or upon one leg, where it has been taken for grease. At other times it has been found round the external genital organs, and these were considered as places of selection. Was this a good interpretation? If the concentration of the pustules took place only on the head or around the genital organs, the fine condition, vascularity and sensibility of the skin of those parts might account for this fact; but the same takes place as often at the inferior extremity of the

extremities, where the dermis and epidermis is very different ; this explanation then, for us, loses considerable of its value. Is it not rather at the point of entrance of the veins that the eruption is greater ? From the few examples reported before, this possesses a greater amount of probability.

And if this was once well established as a fact, it would bring us to select certain parts on which to practice the inoculation, and I believe it will one day be an economical measure to prevent the losses from the accidents which so often complicate this disease.

However, it is positive now that equine variola, limited or confluent, is a simple affection radically curable when its eruption takes place without interference. Coming fortuitously, either by a kind of primitive elaboration of the virus in the equine organism, if this is possible, or by an accidental inoculation whose mechanism is almost always unknown, or that it has been communicated by experiment, in every case it leaves the animals in perfect health after its regular evolution. A few small pale spots may sometimes be seen upon glabrous surfaces, and still these disappear with time. The subsequent deposit of pigment on the narrow circles they form conceals them entirely. There is no more doubt about this. Facts accumulated for years are so numerous that they form together a certain and irrefragable proof. We can then affirm to-day without fear, that equine variola is the least serious of all those which are peculiar to man, sheep, pig, turkey, dog, &c.

Why is it so inoffensive compared with the others ? This is a problem which has yet to be solved. But it is well known that preserving its eruptive form, it does not kill ; not only in the different zoological species on which it has been inoculated and in which it remains local, but even in the species to which it belongs. Here, even though it may be generalized, life runs no risk as long as the disease is not interfered with in its evolution.

This being admitted, let me give the reasons why I consider horse-pox not only simply as the analogue of other variola, but also the true natural form of gourme. The reasons from which

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this conclusion is derived, result from the data furnished to us by comparative pathology, and specially from the rigorous analysis of the phenomena proper to gourme:

Variola of man is often followed after its eruption by the formation of subcutaneous and intermuscular abscesses, lymphangitis and even pyohenria. When the eruption is interrupted by any cause whatever—cold, bad hygiene, bad lodging, etc., as is seen in the epidemics raging amongst soldiers while in campaign, it is often complicated with capillary bronchitis and lobular pneumonia which is rapidly fatal.

It is true these complications are seldom seen in man. They are quite exceptional, while angina and bronchitis are almost a rule in the gourme of horse. But this difference is easy to explain.

As soon as man feels himself suffering with the fever of incubation of this disease, he goes to bed, keeps himself warm—in fact places himself in the most favorable condition for the cutaneous eruption. The horse, on the contrary, often remains all day long in fairs, wagons, bad hotel stables, exposed to cold, rain or winds. All these conditions, which were considered first as causes of development of the disease, have in reality for effect to prevent its external eruption, and by repercussion to give rise to all the inflammatory accidents, considered, right or wrong, as the fundamental causes.

During the existence of an epizootic of small pox in sheep, many animals are seen upon which the cutaneous eruption aborts, if the flock has been exposed to the inclemency of the weather. Then also we have bronchitis and lobular pneumonia. After the regular eruption of varioloid pustules, one may even sometimes see large subcutaneous abscesses. This is, however, rare in sheep, in which the organism is but slightly pyogenous.

All these deviations in the course of the variola of man and of sheep, constitute, no doubt, accidents generally more serious than the catarrhal inflammations of the throat, which are the most common and prominent form of gourme. But one must consider also that these same diseases, in their regular form, are accompanied with a fibrile condition more severe, and of general

troubles more dangerous. There is, altogether, an exact proportion between the extent and the malignity of the normal and abnormal phenomena belonging to one and to the other affections. As to the nature of the pathological processes, they are identical in all the cases. Notwithstanding external modifications more or less marked, they, in reality, present no fundamental difference. And besides, the deviations of the equine disease are far from being always mild. Some capillary bronchitis and all the gourmy pneumonias, lobular or others, are most generally fatal. Their course is slower, but they remain, nevertheless, incurable.

Comparative studies of pathological physiology show consequently a similarity easy to recognize between gourme and variola of man and of sheep; and this resemblance becomes altogether evident when one studies minutely all the symptoms by which it manifests itself.

First of all I will remark that in gourmy horses, one, by close searching, will almost always find several pustules, varying in number, on different parts of the surface of the body. Whether the disease has the appearance of a simple angina, of bronchitis, or even of pneumonia, never is the specific eruption entirely missing. It is easier to find it in man or sheep, whose skin always show slight flat patches, red or brown, even very noticeable when the pustules are stopped in their development. On the horse, the pigmentation of the skin and the thickness of the hair conceal this sign, so well marked in other species. And it is more to the staring condition of the hair and to the presence of a kind of small lenticular nodosity that it can be discovered.

This explains why they are often passed unobserved. Still it is possible, as in some extremely rare cases, that it cannot be recognized; when, for instance, at the onset of the incubation, a serious pneumonia carries off the patient in two or three days. Some young horses may be seen dying in such a short time. It is evident then, that there is not the slightest beginning of an eruption. But these facts are generally exceptional, and do not alter the character of the idea I am trying to establish, for the same thing may happen in sheep.

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Another good proof of what I have stated, is that under the influence of good hygienic care, some horses, presenting first exclusively the symptoms of incipient angina, have two or three days later an eruption, whose appearance is followed by a marked improvement in the local pathological condition. Often have I noticed this condition, and especially lately, in one case which seems to contain alone a true demonstration of the changes in the symptoms.

A gentleman had a four-year-old, which, for about twenty-four hours, had shown the symptoms of a high fever, accompanied with symptoms of a pharyngitis which threatened to be very severe. There was anorexia, dysphagia, abundant salivation and great soreness on pressure of the throat.

Knowing that the animal had come recently from a dealer's stable full of gourmy horses, I thought immediately that this pharyngeal angina might be a manifestation of gourme. Consequently I placed him in a protected stall of the stable, covered him well with two warm blankets, and prescribed for treatment only warm hay tea *ad libitum*; for food anything he would take, and that was but a few grains of oats. Three days later he had a magnificent generalized eruption of horse-pox, and the angina cut short. From this moment he ate with relish hay, oats, mashes, &c., until his recovery, which was quite rapid.

I believe this observation has a great signification. Added to the preceding consideration and the proof obtained on the cow, inoculated with the serosity obtained from the nostrils of a gourmy horse, which I have mentioned before, it constitutes with them a mass of evidence whose probative value cannot be contested.

If then, as I hope, it is clearly established by all these details, that gourme is essentially horse-pox, we come immediately to the conclusion that inoculation is the means most likely to prevent all complications, the probable causes of which I will try, in closing, to indicate.

(*To be continued.*)

REPORT OF CASE.

RUPTURE OF THE FLEXOR METATARSI.

BY C. B. MICHENER, D.V.S.

Editor Veterinary Review:

The literature of cases of ruptured flexor metatarsi of the horse being somewhat rare, I am led to believe that it will not be uninteresting to your readers to report this lesion as it occurred in my practice. Particularly is this case worthy of note since the exact seat of the lesion was clearly defined ; also, from the fact of the rapid recovery made, considering the age of the horse.

The subject, a black gelding, seventeen years old, was out at grass on Nov. 4th, 1879. He was entirely free from lameness when the owner went to the field to catch him for work. The horse started to run along a hillside, but soon slipped and fell to the ground. The off posterior extremity was extended backwards, and dragged for twenty or thirty feet while falling. On regaining the erect posture, the horse was noticed lame in the off hind leg. I saw him on the 10th, six days after the accident, the owner having been convinced that the leg was broken.

While standing still, the leg was in its normal position ; all that could be detected was a slight swelling and some heat at the antero-superior part of the hock joint. When made to move, the inability to flex the hock was plainly demonstrated, and the relaxation and corrugation of the tendo-Achillis was well marked. In advancing the leg, the part inferior to the hock was merely *carried* along, and the power to direct the special movements of this part of the limb was almost entirely lost.

I diagnosed a rupture of the tendon of the flexor-metatarsi, at its division in front of the inferior part of the tibia.

The horse was treated by being placed in his stall ; ordered not to be moved ; and a severe blister applied over the seat of the injury. After the second blister was healed there were marked signs of improvement. A third blister was well by the 12th

of December, and the horse led out of his stall, without showing any symptoms of the lesion. He remains sound on his leg, and does his work, apparently, as well as ever.

SPECIMENS FOR THE MUSEUM OF THE AMERICAN VETERINARY COLLEGE.

BY JOHN C. MYERS, JR., D.V.S.

ARTHRITIS OF THE ELBOW JOINT.

This specimen of the elbow joint was removed from a stallion eight years old, called Membrino Priam, that stood at Morning View, Ky., for breeding purposes. On the 2d of April, 1875, he received a kick upon the elbow joint from a stable companion, inflicting, as the specimen proves, a serious injury.

I will briefly narrate the symptoms as I observed them on the two occasions that I visited him. I at first noticed a large swelling over the lower third of the humerus and the upper region of the radius, with a lacerated wound at the junction of the two bones. He was almost unable to move from the spot, and when forced, he would throw himself upon his hind extremities, carrying the injured limb in a flexed pendulous manner. At long intervals he would put his toe to the ground. No crepitation could be discovered, and disregarding the swelling, there was no deformity. He bore a very anxious expression. His breathing was quite rapid and his appetite impaired. I made a second visit on the 15th of May, by which time the acute symptoms had subsided. His movement was but a trifle better. The swelling was reduced considerably, but what remained felt rather hard and was limited to the upper extremity of the radius. On this visit I removed the slings and discarded the fomentations that had been applied to the seat of injury, and applied a blister over the enlargement, which was repeated about every two weeks for four successive times. Under this treatment he gradually improved, and became quite

serviceable in the stud again, although not entirely convalescent, as the lameness and enlargement were quite perceptible.

Two years later he met with a mysterious accident that caused a rupture of the stomach, on which account I was called to make a post mortem examination, when I captured this specimen.

INTESTINAL CALCULUS.

BY THE SAME.

The intestinal calculus is one of a half peck that I removed from the pelvic curvature of the large colon, of a horse that suffered with colitis for four days, caused by these calculi obstructing the colon.

FRACTURE AT THE COXO FEMORAL JOINT.

BY THE SAME.

The animal from which this specimen came was a fashionably bred colt, one and a half years old, which I visited on the 9th day of August, 1877, six weeks after he met with an unaccountable accident, that fractured the neck of the femur. There was a painful swelling over the coxo-femoral joint and its vicinity, with extreme lameness, characterized by an inability to propel his leg and a dread to put his foot to the ground. He frequently flexed his limb and held it in that position for several minutes, then he would put the foot to the ground upon the toe, about four inches in advance of the opposite foot. When urged to go rapidly, he would carry the limb in the air in a vertical manner. By the 12th of October, an abscess had formed below the external angle of the ilium, which I evacuated, and found it emerging from the region of the joint. February 4th, 1878, I obtained the owner's consent to destroy him. On my arrival I found him but little better in his movement. His gluteal and crural muscles were very much atrophied. I destroyed him by injecting a strong solution of cyanide of potash into the jugular vein, which killed him

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instantly. I removed the hip with the femur, and stripped off their integument and muscle, when I discovered a large mass of fibrous tissue, from one to two inches in thickness at various points, under which I found a remarkable-sized calcareous tumor of a friable nature. Owing to this property it greatly reduced in size during the cleaning and drying process; however, the pathological lesions are extensive enough to make the specimen interesting.

I tried to induce the owner to destroy the colt on my first visit. This he was unwilling to do, without making some effort to restore his action. I did not revisit him until I was requested to repair to the farm, a distance of twenty miles, and examine the nature of the swelling that formed along the ilium, which proved to be an abscess. After having evacuated the same, the owner regained his confidence, and permitted the animal to live until February 4th, 1878.

NOTES ON THE MILITARY VETERINARY SERVICE IN ITALY.

FURNISHED BY THE LIEUTENANT COLONEL, INSPECTOR OF THE
VETERINARY CORPS.

Before 1821, the army of Piedmont had no appointed veterinarians. For the succeeding 24 years the only attending military veterinary surgeons were appointed for the time-being, as needed, and ranked with the officers of the lowest grade.

Towards 1848 veterinarians were ranked as officers, and received the uniform of cavalry officers and small salaries. In 1850 they were lowered in their position, as in 1821 and following years.

In 1858 the position of Chief Veterinary Surgeon, appointed from the professors in civil practice, was created. He received the title of Adjunct Inspector to the Superior Military Sanitary Council.

In July, 1861, the veterinary personnel was reorganized as an effective corps, and the Inspector ranked as major. The service

was then reorganized by the appointment of seven Chief Veterinary Surgeons, with the rank and pay of captains.

In 1871 the Chief Inspector was selected from among the army veterinarians.

With the reforms due to General Ricolti, in 1873, the Chief Inspector was raised to the rank of lieutenant colonel, the Veterinary Chiefs to those of majors and captains.

In 1877 the number of Veterinary Surgeons ranking as captains was increased.

The organization to-day is as follows: One Veterinary Lieutenant Colonel Inspector, attached to the Minister of War; seven Veterinary Majors, attached to the seven corps d'armée; three Veterinary Captains, attached to special corps d'armée; to each regiment of artillery forming the corps d'artillery, one Captain, two Lieutenants and two Sub-Lieutenants; one Lieutenant each for the two regiments of the engineer corps; one Captain and two Lieutenants to the Military School of Piperole; one Captain to the School at Moden, one to that at Turino, and one Lieutenant to that at Caghari; three Captains and three Lieutenants for the breeding establishments, or remontes. To resume, there are—

1 Lieutenant Colonel, with a salary of 5,600 francs.
7 Majors, - - - " " 4,000 "
39 Captains, - - - " " 2,800 "
59 Lieutenants, - - - " " 2,000 "
39 Sub-Lieutenants, - - - " " 1,800 "

ARMY VETERINARIANS.

LETTER FROM THE ADJUTANT GENERAL.

Washington, January 3, 1880.

DR. A. LIAUTARD,

Amer. Vet. College, N. Y. City.

SIR.—In reply to your letter dated Dec. 22, 1879, I have to inform you that each regiment of cavalry in the service of the United States is allowed one veterinary surgeon, at a salary of

\$75. per month, and the 7th, 8th, 9th and 10th regiments are each allowed one additional veterinary surgeon at a salary of \$100. per month.

A veterinary surgeon of a regiment is appointed only upon the favorable report of a Regimental Examining Board and the recommendation of regimental commander. An application for appointment to that grade should therefore be addressed to the commanding officer of the regiment in which the appointment is desired.

There are vacancies in the following enumerated regiments.

1st Cavalry, Fort Walla Walla, Washington Ty.

3d " " Laramie, Wyoming Ty.

6th " " Lowry, Arizona Ty.

8th " " Ringgold, Rio Grande City, Texas.

Very respectfully,

Your obedient servant,

C. Busch,

Assistant Adjutant General.

BIBLIOGRAPHY.

LA TRICHINE ET LA TRICHINOSE.

BY ED. DELE.

This is the title of an excellent little pamphlet which has been recently published and written by Mr. Dele, Veterinary Surgeon of Anvers. It is one of the most complete documents on the subject, and will prove of great interest to those who will read it.

Beginning at the history of the disease and passing in review the epochs of its appearance in the different parts of the globe, this is followed by the second chapter, which treats of the anatomy and physiology of the trichina itself, its periods of development, mode of living, &c. Further on we are told of the vital resistance of this parasite and of the different means by which it

can be destroyed. In the following chapter the symptomology of trichinosis in man and animals are comparatively given and extensively treated, followed by the hygienic measures to be recommended as prophylactic and to be applied in Belgium.

In conclusion Mr. Dele says: trichinosis is a disease often painful, sometimes fatal, produced in man by the use of raw swine meat containing trichina.

In different European countries trichina have been found in salted or smoked pork of American import. In Germany these nematoids have been found in fresh as well as in preserved meat.

To overcome the effects likely to follow the use of the meat suspected of being trichinized, there is indication for those coming from the United States of America: 1st. to stop entirely the introduction of sausages into Belgium; 2d. to have microscopical examinations of all other meat of pork imported, and perhaps to mark that recognized as free from trichina; 3d. to transform that recognized to be infected; 4th. to vulgarize the fact of the entire innoxiousness of the trichinized meat when *sufficiently cooked*.

These are the means by which one may avoid being *eaten by worms*, as Zundel said in 1864, or else to abjure one's religion and to become Jew, as proposed by the *Chicago Tribune*.

HAND-BOOK OF VETERINARY OPERATIVE SURGERY.

BY M. EDWARD v. HERING.

(*Third Revised Edition.*)

This revised edition is written in the German language; it is the latest and most complete illustrated operative surgery at our command. Practitioners as well as students will find it a most excellent guide to familiarize themselves with the technicalities of modern surgery, especially since it is edited by one of the most ardent and eminent veterinary authors. Reflecting upon his official position at the Royal Veterinary Institute, and his connec-

tion with the numerous scientific bodies throughout Europe, we can readily realize the perfection of his practical ability and theoretical knowledge; the essence of which he has liberally imparted to this book, with the sole motive of promoting veterinary science.

The first part of the introductory chapter dwells upon diagnosis, prognosis, dexterity, technicality, methods, effects, time, constitution, season, weather, character of disease, preparatory measures, assistants, instruments, appliances and after treatment.

In the second chapter, the means of restraint are elaborately discussed and creditably portrayed. Here attention is directed to the use of anaesthetics, one of the most important steps toward the advancement of veterinary science.

The operative portion is arranged in two divisions: The first into operations which can be performed on various parts of the body, having either a local or general action, such as phlebotomy, means of arresting hemorrhage, transfusion, inoculation, sutures, electricity, abscesses, open joints, polipy, excrescences, transplantation, removal of foreign bodies, cautery, &c.; the second division treats of operations which can only be performed on special parts of the body, to remedy evils in that particular region. This class is divided into six divisions, according to their relative locality: 1st, head; 2d, neck; 3d, abdomen and thorax; 4th, anus and tail; 5th, reproductive and urinary organs; 6th, extremities.

This is the third edition on operative surgery Prof. v. Hering has furnished the profession. It contains 335 large pages of matter, and embraces all modern principles and practice of veterinary surgery adopted by himself, as well as other distinguished veterinarians, whom he freely cites.

There exists translations of this work into the Russian and Italian languages; and undoubtedly its translation into the English language would be highly appreciated by our colleagues, and we are sure the venerable author would cheerfully grant the privilege, and assist any individual who would undertake the task. The merits of the manual are greatly enhanced by the 204 wood cuts and the 12 finely executed lithographic illustrations it contains, thereby presenting the subject it treats upon in a very explicit manner.

(J. C. M.)

LAMINITIS.

We have seen the proof of a little monogram by Prof. A. A. Holcombe, on this diseased process of the horse's foot, treating of the whole subject so far as Nomenclature, Aetiology, Symptoms, Lesions, Complications, Treatment, &c. The whole is included in about 35 pages of interesting matter, illustrated by wood cuts, presented to the United States Veterinary Medical Association in competition for prize, but which, in the estimation of the committee, failed to reach the desired standard. "Laminitis" will prove of interest to those who pay special attention to diseases of the feet. The work, which is just out of the printers' hands, can be had from the author, as will be seen by the notice given in our advertising pages. More about it hereafter.

NOTES AND NEWS.

VETERINARY BOARD OF HEALTH.

The *Observador Medico* is authority for the statement that an endeavor is now being made in Mexico to establish a Veterinary Board of Health. At the same time it is desired that a law be passed compelling owners and those having charge of animals to report to the Board any enzootic or epizootic disease which may make its appearance. It then will become the duty of the proposed Board to send a Commission of Veterinary Surgeons to investigate the disease, and employ such measures as may be necessary to prevent a further spreading of the disorder. The power to be granted such Commissions would seem to be comprehensive enough to accomplish the desired end; for, not only are the common measures of restriction to be enforced, but also the prohibition of the sale of meat, milk, hides or other parts of the diseased animals.

RECOGNITION OF THE PROFESSION.

The *Medical and Surgical Reporter* says in the issue of Jan. 17th, 1880, under the head of Personal: A marble statue to Bourgelat, founder of the Veterinary School of Paris, was unveiled in that city Oct. 30th, 1879. When will veterinary science receive like recognition in this country?

REVOLT AMONGST THE STUDENTS AT ALFORT.

Under the futile pretext of some re-enforcements in the general discipline to which students are submitted by ministerial regulations in the French veterinary schools, two hundred students of Alfort, on the night of the 29th of November, 1879, revolted. Everything which belongs to such acts amongst students was carried out; breaking of windows, of brooms, &c., a great deal of noise, followed with a forced day of vacation, by the trespassing of the wall or gates in process of construction. The result was a ministerial visit, an inquiry into the cause of the difficulty, and the temporary discharge of two hundred members of the four classes. After further consideration, they were authorized to re-enter the school on the 22d of December, with the exception of twelve of the leaders, to whom the doors of the veterinary profession in France are closed.

INTERNATIONAL VETERINARY CONGRESS IN 1880.

At the meeting of the Veterinary Society of Liege, held Oct. 28th, Mr. Eraers, Veterinary Surgeon, offered a resolution for the organization of an International Veterinary Congress, to be held in Belgium during the festivities which will take place on the occasion of the fiftieth anniversary of independence of that country.

CIRCULAR.

TESTIMONIAL TO MAJOR GENERAL SIR FREDERICK FITZWYGRAM, BART.

DEAR SIR:—At a meeting held in Red Lion Square, London, on the 1st of July, 1879, it was unanimously resolved that a Testimonial should be presented to Major General Sir Frederick Fitzwygram, Bart., in recognition of the great interest he has taken in the advancement of the profession and the very able manner with which he carried out the duties of President of the Royal College of Veterinary Surgeons during the three years he held that office. It may be correctly affirmed that he spared neither time, trouble nor expense in advancing the position of our calling and in effecting a reconciliation between conflicting interests in the profession. Besides which, he has offered inducements far greater than any previously existing, to encourage students to pursue their studies and to become more thoroughly efficient in every branch of their education.

It is proposed that the Testimonial should take the form of a Portrait to be presented to Sir Frederick by a united profession as a token of the respect and high esteem in which he is held, and that a duplicate portrait be hung in the college. The presumed cost will be from 300 to 400 guineas, and to raise this amount the subscriptions will be unlimited. The following gentlemen have consented to form the Executive Committee, and in their names I solicit your interest in this proposal and request that you will kindly forward your subscription to the treasurer, Henry Joseph Cartwright, Veterinary Surgeon, Wolverhampton.

I beg to remain, Dear Sir,
Yours very truly,

Knott Mill,
Manchester.

THOMAS GREAVES,
Hon. Sec.

THE EXECUTIVE COMMITTEE.

CHAIRMAN.

JAMES BEART SIMONDS,

Principal and Professor, Royal Veterinary College, London.

TREASURER.

HENRY JOSEPH CARTWRIGHT, Esq.,

Vice President of Council, Wolverhampton.

HONORARY SECRETARY.

THOMAS GREAVES, Esq.,

Member of Council, Manchester.

WILLIAM WILLIAMS, President of the Royal College of Veterinary Surgeons, Principal and Professor, New Veterinary College, Edinburgh.

JAMES McCALL, Principal and Professor, Veterinary College, Glasgow.

THOMAS WALTON MAYER, Professor, Agricultural College, Cirencester.

D. McEACHRAN, Principal and Professor, Veterinary College, Montreal.

And many other members of the profession.

EXCHANGES, ETC., RECEIVED.

Gazette Medicale (Paris), Journal de Zootechnie (Lyons), Veterinarian, Veterinary Journal, (London), Archives Veterinaires (Alfort), Annales de Medecine Veterinaire (Bruxelles), Recueil de Medecine Veterinaire (Paris), Clinica Veterinaria (Milan), Revue Dosimetrique (Paris), Monatschrift des Vereines der Thierarzte in Oesterreich (Vienna), Revue fur Thierheilkunde und Thierzucht (Vienna), Hospital Gazette, Medical Record, Prairie Farmer, Turf, Field and Farm, Scientific American, American Agriculturist, &c., &c.

JOURNALS.—The People (Concord), Philadelphia Inquirer, Evening Telegram of Philadelphia.

REPORTS.—Pennsylvania Board of Agriculture, National Board of Health.

PAMPHLETS.—Experiences Relatives a la Culture de la Trichine, by E. Dele; La Trichine et la Trichinose, by E. Dele.

CORRESPONDENCE.—N. H. Paaren, M.D., V.S.; J. C. Myers, Sr., D.V.S.; W. Gadsden, M.R.C.V.S.; J. C. Myers, Jr., D.V.S.; D. C. McEachran, F.R.C.V.S.